#4

```
SEQUENCE LISTING
     Hebbel, R.P.
      Lin, Y.
      Lollar, J.S.
<120> Transgenic circulating endothelial cells
<130> 600.449US1
<140> US 09/865,022
<141> 2001-05-24
<150> PCT/US99/28033
<151> 1999-11-24
<150> US 60/109,687
<151> 1998-11-24
<160> 4
<170> FastSEQ for Windows Version 4.0
<210> 1
<211> 5094
<212> DNA
<213> Artificial Sequence
<220>
<223> The DNA sequence of HSO/eGFP.
```

```
atgcaaatag agctctccac ctgcttcttt ctgtgccttt tgcgattctg ctttagtgcc
                                                                        60
accagaagat actacctggg tgcagtggaa ctgtcatggg actatatgca aagtgatctc
                                                                       120
ggtgagctgc ctgtggacgc aagatttcct cctagagtgc caaaatcttt tccattcaac
                                                                       180
acctcagtcg tgtacaaaaa gactctgttt gtagaattca cggttcacct tttcaacatc
                                                                       240
gctaagccaa ggccaccctg gatgggtctg ctaggtccta ccatccaggc tgaggtttat
                                                                       300
gatacagtgg tcattacact taagaacatg gcttcccatc ctgtcagtct tcatgctgtt
                                                                       360
ggtgtatcct actggaaagc ttctgaggga gctgaatatg atgatcagac cagtcaaagg
                                                                       420
gagaaagaag atgataaagt cttccctggt ggaagccata catatgtctg gcaggtcctg
                                                                       480
aaagagaatg gtccaatggc ctctgaccca ctgtgcctta cctactcata tctttctcat
                                                                       540
gtggacctgg taaaagactt gaattcaggc ctcattggag ccctactagt atgtagagaa
                                                                       600
gggagtctgg ccaaggaaaa gacacagacc ttgcacaaat ttatactact ttttgctgta
                                                                       660
tttgatgaag ggaaaagttg gcactcagaa acaaagaact ccttgatgca ggatagggat
                                                                       720
gctgcatctg ctcgggcctg gcctaaaatg cacacagtca atggttatgt aaacaggtct
                                                                       780
ctgccaggtc tgattggatg ccacaggaaa tcagtctatt ggcatgtgat tggaatgggc
                                                                       840
accactcctg aagtgcactc aatattcctc gaaggtcaca catttcttgt gaggaaccat
                                                                       900
cgccaggcgt ccttggaaat ctcgccaata actttcctta ctgctcaaac actcttgatg
                                                                       960
gaccttggac agtttctact gttttgtcat atctcttccc accaacatga tggcatggaa
                                                                      1020
gcttatgtca aagtagacag ctgtccagag gaaccccaac tacgaatgaa aaataatgaa
                                                                      1080
gaagcggaag actatgatga tgatcttact gattctgaaa tggatgtggt caggtttgat
                                                                      1140
gatgacaact ctccttcctt tatccaaatt cgctcagttg ccaagaagca tcctaaaact
                                                                      1200
tgggtacatt acattgctgc tgaagaggag gactgggact atgctccctt agtcctcgcc
                                                                      1260
cccgatgaca gaagttataa aagtcaatat ttgaacaatg gccctcagcg gattggtagg
                                                                      1320
aagtacaaaa aagtccgatt tatggcatac acagatgaaa cctttaagac tcgtgaagct
                                                                      1380
attcagcatg aatcaggaat cttgggacct ttactttatg gggaagttgg agacacactg
                                                                     1440
ttgattatat ttaagaatca agcaagcaga ccatataaca tctaccctca cggaatcact
                                                                     1500
gatgtccgtc ctttgtattc aaggagatta ccaaaaggtg taaaacattt gaaggatttt
                                                                     1560
ccaattctgc caggagaaat attcaaatat aaatggacag tgactgtaga agatgggcca
                                                                     1620
```

	actaaatcag	atcctcggtg	, cctgacccgc	: tattactcta	gtttcgttaa	tatggagaga	1680
	gatctagctt	caggactcat	tggccctctc	ctcatctgct	acaaagaato	tgtagatcaa	1740
	agaggaaacc	: agataatgto	agacaagagg	aatgtcatcc	tgttttctqt	atttgatgag	1800
	aaccgaagct	ggtacctcac	agagaatata	caacgctttc	tccccaatcc	agctggagtg	1860
	cagcttgagg	atccagagtt	ccaagcctcc	aacatcatgo	acaqcatcaa	tggctatgtt	1920
	tttgatagtt	tgcagttgtc	agtttqtttq	catgaggtgg	catactggta	cattctaagc	1980
	attggagcac	agactgactt	cctttctqtc	ttcttctcta	gatatacctt	caaacacaaa	2040
	atggtctatg	aagacacact	caccctatto	ccattctcag	gagaaactgt	cttcatgtcg	2100
	atggaaaacc	caggtctatg	gattctgggg	tgccacaact	cagactttcg	gaacagaggc	2160
	atgaccgcct	tactgaaggt	ttctagttgt	gacaagaaca	ctaataatta	ttacgaggac	2220
	agttatgaag	atatttcago	atacttocto	agtaaaaaca	atoccattoa	acctaggage	2280
	ttctctcaga	atatootogo	casaaacasa	gagetattea	ccacataat	gcccatcctg	2340
	atcaaactaa	acaacaacat	aaacggccac	aagttcagca	tatacaaaa	geceatett	
	gatgccacct	acqqcaaqct	gaccctgaag	ttgatgtg	agaaaaaaa	gggcgagggc	2400
	ccctaaccca	ccctcatasc	gaccctgaag	tagggggtag	ccaccggcaa	gctgcccgtg	2460
	gaccacatga	accacacac	caccctgacc	tacggcgtgc	agtgetteag	ccgctacccc	2520
	gaccacatga	agcagcacga	cttetteaag	teegecatge	ccgaaggcta	cgtccaggag	2580
	aggazaaga	tetteaagga	cgacggcaac	tacaagaccc	gcgccgaggt	gaagttcgag	2640
	ggegaeaeee	tggtgaaccg	catcgagctg	aagggcatcg	acttcaagga	ggacggcaac	2700
	accetgggge	acaagctgga	gtacaactac	aacagccaca	acgtctatat	catggccgac	2760
	aagcagaaga	acggcatcaa	ggtgaacttc	aagatccgcc	acaacatcga	ggacggcagc	2820
	gtgcagctcg	ccgaccacta	ccagcagaac	acccccatcg	gcgacggccc	cgtgctgctg	2880
	cccgacaacc	actacctgag	cacccagtcc	gccctgagca	aagaccccaa	cgagaagcgc	2940
	gatcacatgg	tcctgctgga	gttcgtgacc	gccgccggga	tcactctcgg	catggacgag	3000
	ctgtacaagt	atccaccagt	cttgaaacgc	catcaacggg	aaataactcg	tactactctt	3060
	cagtcagatc	aagaggaaat	tgactatgat	gataccatat	cagttgaaat	gaagaaggaa	3120
	gattttgaca	tttatgatga	ggatgaaaat	cagagccccc	gcagctttca	aaagaaaaca	3180
	cgacactatt	ttattgctgc	agtggagagg	ctctgggatt	atgggatgag	tagctcccca	3240
	catgttctaa	gaaacagggc	tcagagtggc	agtgtccctc	agttcaagaa	agttgttttc	3300
	caggaattta	ctgatggctc	ctttactcag	cccttatacc	gtggagaact	aaatqaacat	3360
	ttgggactcc	tggggccata	tataagagca	gaagttgaag	ataatatcat	ggtaactttc	3420
	agaaatcagg	cctctcgtcc	ctattccttc	tattctagcc	ttatttctta	tgaggaagat	3480
	cagaggcaag	gagcagaacc	tagaaaaaac	tttgtcaagc	ctaatqaaac	caaaacttac	3540
	ttttggaaag	tgcaacatca	tatggcaccc	actaaagatg	agtttgactg	caaaqcctqq	3600
	gcttatttct	ctgatgttga	cctggaaaaa	gatgtgcact	caggcctgat	tggacccctt	3660
	ctggtctgcc	acactaacac	actgaaccct	gctcatggga	qacaaqtqac	agtacaggaa	3720
	tttgctctgt	ttttcaccat	ctttgatgag	accaaaaqct	ggtacttcac	tgaaaatatg	3780
	gaaagaaact	gcagggctcc	ctgcaatatc	cagatggaag	atcccacttt	taaagagaat	3840
	tatcgcttcc	atqcaatcaa	tggctacata	atggatacac	tacctggctt	agtaatggct	3900
	caggatcaaa	ggattcgatg	gtatctgctc	agcatgggca	gcaatgaaaa	catccattct	3960
	attcatttca	gtggacatgt	gttcactgta	cgaaaaaaaa	aggagtataa	aataacacta	4020
	tacaatctct	atccaggtgt	ttttgagaca	atagaaatat	taccatccaa	acctggaatt	4080
	taacaaataa	aatgccttat	tggcgagcat	ctacatacta	ggatgaggag	agetygaatt	4140
	gtgtacagca	ataagtgtca	gactcccctg	ggaatggctt	ctoracacat	tagagatttt	4200
	cagattacag	cttcaggaca	atatggacag	tagacccaa	agetggeeac	acttoattat	4260
	tccggatcaa	tcaatgcctg	gagcaccaag	gaggcctttt	cttagateaa	acticaticat	
	ttggcaccaa	tgattattca	cggcatcaag	acceangete	cccggaccaa	ggtggatttg	4320
	ctctacatct	ctcactttat	catcatetat	acceagggeg	cccgccagaa	greeceage	4380
	caacaaatt	ccactagaaa	catcatgtat	ttatttaga	ggaagaagtg	geagaettat	4440
	aaacacaata	tttttaaccc	cttaatggtc	astasstass	teestates	accigggata	4500
	tataggatto	ggaggagtet	tccaattatt	geregaraea	ceegtttgea	cccaactcat	4560
	ataccattaa	geageactet	tcgcatggag	traction	grgarttaaa	tagttgcage	4620
,	tttaccaata	tatttaaaaa	taaagcaata	tassassis	agattactgc	ttcatcctac	4680
	artastoret	ggagagata	ctggtctcct	ccaaaagctc	gacttcacct	ccaagggagg	4740
	agraargeet	ggagacccca	ggtgaataat	ccaaaagagt	ggctgcaagt	ggacttccag	4800
•	tatataa	aagicacagg	agtaactact	cagggagtaa	aatctctgct	taccagcatg	4860
1	acycyaagg	agttcctcat	ctccagcagt	caagatggcc	atcagtggac	tctcttttt	4920
,	tatata	aagtaaaggt	ttttcaggga	aatcaagact	ccttcacacc	tgtggtgaac	4980
1	coloragace	caccgttact	gactcgctac	cttcgaattc	acccccagag	ttgggtgcac	5040
(cagattgccc	tgaggatgga	ggttctgggc	tgcgaggcac	aggacctcta	ctga	5094

<210> 2 <211> 12445 <212> DNA <213> Artificial Sequence

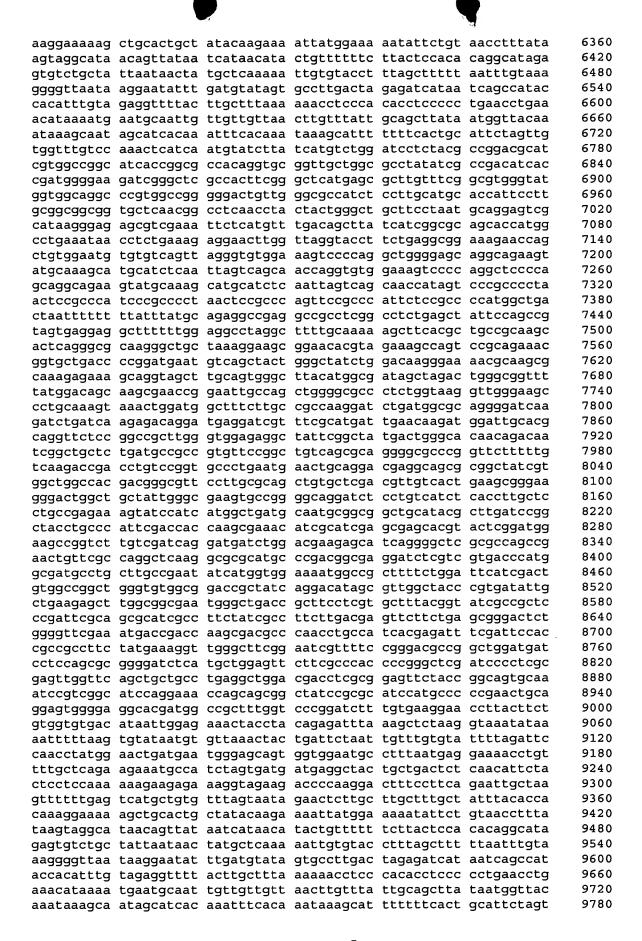
<220>

<223> The DNA sequence of HSQRENeo.

<400> 2

60 gaatteegga atteeagett getgtggaat gtgtgteagt tagggtgtgg aaagteecea ggctccccag caggcagaag tatgcaaagc atgcatctca attagtcagc aaccaggtgt 120 180 ggaaagtccc caggctcccc agcaggcaga agtatgcaaa gcatgcatct caattagtca 240 gcaaccatag tecegecet aacteegeee ateeegeee taacteegee eagtteegee catteteege eccatggetg actaattttt tttatttatg cagaggeega ggeegeeteg 300 gcctctgagc tattccagaa gtagtgagga ggcttttttg gaggggtcct cctcgtatag 360 aaactcggac cactctgaga cgaaggctcg cgtccaggcc agcacgaagg aggctaagtg 420 480 ggaggggtag cggtcgttgt ccactagggg gtccactcgc tccagggtgt gaagacacat 540 gtcgccctct tcggcatcaa ggaaggtgat tggtttatag gtgtaggcca cgtgaccggg 600 tgttcctgaa gggggggtat aaaagggggt gggggcgct tcgtcctcac tctcttccgc 660 ategetgtet gegagggeea getgttggge tegeggttga ggaeaaacte ttegeggtet 720 ttccagtact cttggatcgg aaacccgtcg gcctccgaac ggtactccgc caccgaggga cctgagcgag tccgcatcga ccggatcgga aaacctctcg agccaccatg caaatagagc 780 tetecacetg ettettetg tgeettttge gattetgett tagtgecace agaagataet 840 900 acctgggtgc agtggaactg tcatgggact atatgcaaag tgatctcggt gagctgcctg 960 tggacgcaag atttcctcct agagtgccaa aatcttttcc attcaacacc tcagtcgtgt 1020 acaaaaagac tctgtttgta gaattcacgg ttcacctttt caacatcgct aagccaaggc 1080 caccetggat gggtctgcta ggtcctacca tecaggetga ggtttatgat acagtggtca ttacacttaa gaacatggct tcccatcctg tcagtcttca tgctgttggt gtatcctact 1140 ggaaagcttc tgagggagct gaatatgatg atcagaccag tcaaagggag aaagaagatg 1200 ataaagtett ceetggtgga agceatacat atgtetggea ggteetgaaa gagaatggte 1260 1320 caatggcctc tgacccactg tgccttacct actcatatct ttctcatgtg gacctggtaa aagacttgaa ttcaggcctc attggagccc tactagtatg tagagaaggg agtctggcca 1380 aggaaaagac acagaccttg cacaaattta tactactttt tgctgtattt gatgaaggga 1440 aaagttggca ctcagaaaca aagaactcct tgatgcagga tagggatgct gcatctgctc 1500 gggcctggcc taaaatgcac acagtcaatg gttatgtaaa caggtctctg ccaggtctga 1560 ttggatgcca caggaaatca gtctattggc atgtgattgg aatgggcacc actcctgaag 1620 tgcactcaat attcctcgaa ggtcacacat ttcttgtgag gaaccatcgc caggcgtcct 1680 tggaaatete gecaataaet tteettaetg etcaaacaet ettgatggae ettggaeagt 1740 1800 ttctactgtt ttgtcatatc tcttcccacc aacatgatgg catggaagct tatgtcaaag tagacagctg tccagaggaa ccccaactac gaatgaaaaa taatgaagaa gcggaagact 1860 atgatgatga tettaetgat tetgaaatgg atgtggteag gtttgatgat gaeaactete 1920 1980 cttcctttat ccaaattcgc tcagttgcca agaagcatcc taaaacttgg gtacattaca ttgctgctga agaggaggac tgggactatg ctcccttagt cctcgccccc gatgacagaa 2040 2100 gttataaaag tcaatatttg aacaatggcc ctcagcggat tggtaggaag tacaaaaaag 2160 tccgatttat ggcatacaca gatgaaacct ttaagactcg tgaagctatt cagcatgaat 2220 caggaatett gggacettta etttatgggg aagttggaga cacactgttg attatattta agaatcaagc aagcagacca tataacatct acceteaegg aatcaetgat gteegteett 2280 2340 tgtattcaag gagattacca aaaggtgtaa aacatttgaa ggattttcca attctgccag 2400 gagaaatatt caaatataaa tggacagtga ctgtagaaga tgggccaact aaatcagatc ctcggtgcct gacccgctat tactctagtt tcgttaatat ggagagagat ctagcttcag 2460 2520 gactcattgg ccctctcctc atctgctaca aagaatctgt agatcaaaga ggaaaccaga taatgtcaga caagaggaat gtcatcctgt tttctgtatt tgatgagaac cgaagctggt 2580 acctcacaga gaatatacaa cgctttctcc ccaatccagc tggagtgcag cttgaggatc 2640 cagagttcca agcctccaac atcatgcaca gcatcaatgg ctatgttttt gatagtttgc 2700 agttgtcagt ttgtttgcat gaggtggcat actggtacat tctaagcatt ggagcacaga 2760 ctgacttcct ttctgtcttc ttctctggat ataccttcaa acacaaaatg gtctatgaag 2820

acacactcac	cctattccc	ı ttctcaggag	, aaactgtctt	catgtcgatg	gaaaacccag	2880
gtctatggat	tetggggtge	cacaactcag	, actttcggaa	cagaggcatg	accgccttac	2940
tgaaggtttc	: tagttgtgac	: aagaacactg	, gtgattatta	cgaggacagt	tatgaagata	3000
tttcagcata	cttgctgagt	: aaaaacaatg	r ccattgaacc	taggagcttc	tctcagaatc	3060
caccagtctt	gaaacgccat	caacgggaaa	taactcgtac	tactcttcag	tcagatcaag	3120
aggaaattga	ctatgatgat	accatatcag	r ttgaaatgaa	gaaggaagat	tttgacattt	3180
atgatgagga	. tgaaaatcag	agcccccgca	gctttcaaaa	gaaaacacga	cactatttta	3240
ttgctgcagt	ggagaggctc	: tgggattatg	ggatgagtag	ctccccacat	gttctaagaa	3300
acagggctca	gagtggcagt	gtccctcagt	tcaagaaagt	tgttttccag	gaatttactg	3360
atggctcctt	tactcagccc	ttataccgtg	gagaactaaa	tgaacatttg	ggactcctgg	3420
ggccatatat	aagagcagaa	gttgaagata	. atatcatggt	aactttcaga	aatcaggcct	3480
ctcgtcccta	ttccttctat	tctagcctta	tttcttatga	ggaagatcag	aggcaaggag	3540
cagaacctag	aaaaaacttt	gtcaagccta	atgaaaccaa	aacttacttt	tggaaagtgc	3600
aacatcatat	ggcacccact	aaagatgagt	ttgactgcaa	agcctgggct	tatttctctg	3660
atgttgacct	ggaaaaagat	gtgcactcag	gcctgattgg	accccttctg	gtctgccaca	3720
ctaacacact	gaaccctgct	catgggagac	aagtgacagt	acaggaattt	gctctgtttt	3780
tcaccatctt	tgatgagacc	aaaagctggt	acttcactga	aaatatggaa	agaaactgca	3840
gggctccctg	caatatccag	atggaagatc	ccacttttaa	agagaattat	cgcttccatg	3900
caatcaatgg	ctacataatg	gatacactac	ctggcttagt	aatggctcag	gatcaaaqqa	3960
ttcgatggta	tctgctcagc	atgggcagca	atgaaaacat	ccattctatt	catttcaqtq	4020
gacatgtgtt	cactgtacga	aaaaaagagg	agtataaaat	ggcactgtac	aatctctatc	4080
caggtgtttt	tgagacagtg	gaaatgttac	catccaaaqc	tqqaatttqq	cagatagaat	4140
gccttattgg	cgagcatcta	catgctggga	tgagcacact	ttttctaata	tacagcaata	4200
agtgtcagac	tcccctggga	atggcttctg	gacacattag	agattttcag	attacagett	4260
caggacaata	tggacagtgg	gccccaaagc	tggccagact	tcattattcc	ggatcaatca	4320
atgcctggag	caccaaqqaq	cccttttctt	ggatcaaggt	ggatctgttg	gcaccaatga	4380
ttattcacgg	catcaaqacc	cagggtgccc	gtcagaagtt	ctccagcctc	tacatetete	4440
agtttatcat	catqtataqt	cttgatggga	agaagtggca	gacttatcga	ggaaattcca	4500
		tttggcaatg				4560
ttaaccctcc	aattattqct	cgatacatcc	gtttgcaccc	aactcattat	agcattcgca	4620
gcactcttcg	catqqaqttq	atgggctgtg	atttaaatag	ttgcagcatg	ccattgggaa	4680
tggagagtaa	aqcaatatca	gatgcacaga	ttactgcttc	atcctacttt	accaatatgt	4740
ttqccacctq	qtctccttca	aaagctcgac	ttcacctcca	aggaagaat	aatacctaga	4800
gacctcaggt	gaataatcca	aaagagtggc	tgcaagtgga	cttccagaag	acaatgaaag	4860
		ggagtaaaat				4920
tcctcatctc	cagcagtcaa	gatggccatc	agtggactct	cttttttcag	aataacaaaa	4980
		caagactcct				5040
		cgaattcacc				5100
qqatqqaqqt	tctagactac	gaggcacagg	acctctactg	agaacaacca	ctgcagcaga	5160
tgccactgcc	gtcacctctc	cctcctcagc	tccagggcag	tatccctccc	tagettaget	5220
tctacctttq	tgctaaatcc	tagcagacac	taccttaaaa	cctcctgaat	taactatcat	5280
cagtcctgca	tttctttaat	ggggggccag	gagggtgcat	ccaatttaac	ttaactctta	5340
cctattttct	gcagctgctc	ccagattact	ccttccttcc	aatataacta	aacaaaaaa	5400
agtgaggaga	aacctgcatg	aaagcattct	tcctgaaaa	attagacta	tcagagtgag	5460
		aactatgtga				5520
		atacgtttaa				5580
tcaagcatgg	aacaaagcat	gtttcaggat	cacatcasta	caatcttcca	attaccetya	5640
aaatcatttq	gacaatctgc	aaaatggaga	cagaccaaca	actactacac	taaaatatat	5700
ttctacttcc	ttacacatac	atataattat	gaacacaaca	actactacag	caaageetge	
tatctccaaa	actaccattc	ttaaactgag	aattatagat	caccatgagg	ggcacattet	5760 5000
tecetgaaa	ttatataagg	cattctgtat	aactacagat	ggggcccaag	atacasata	5820
tccatagata	taggacatat	gacgtgagct	cadatette	taaaaaaaa	ttacttatat	5880 5940
gatataacat	aattggacacac	actacctaca	gagatttaaa	actatasaat	anathtana	
tttttaagtg	tataatoto+	taaactactg	attotaatto	tttatatatat	ttagattaga	6000
						6060 6120
tactcaceac	aaatoccato	ggagcagtgg	gaggetagte	ctaacyagga	adacctgttt	6120
cctccaaaaa	adaadadaaa	tagtgatgat ggtagaagac	cccaaccact	ttaattaaa	acattcact	6180
tttttgagtg	atactatatt	tagtaataga	actottoctt	actttactat	ttagagaga	6240
	geegegee	cuycaacaya	accuracycut	gettigetat	ccacaccaca	6300





						· •	
	tgtggtttgt	ccaaactcat	: caatggtatc	: ttatcatgtc	tggatctcga	ccgagccctt	9840
	gagagccttc	: aacccagtca	ı gctccttccg	gtgggcgcgg	ggcatgacta	tcatcaccac	9900
	acttatgact	gtcttcttta	ı tcatgcaact	cgtaggacag	gtgccggcag	cactctagat	9960
	cattttcggc	: gaggaccgct	: ttcgctggag	cgcgacgatg	atcggcctgt	cacttacaat	10020
	attcggaatc	: ttgcacgccc	: tcgctcaagc	cttcgtcact	ggtcccqcca	ccaaacqttt	10080
	cggcgagaag	, caggccatta	. tcgccggcat	ggcggccgac	gcgctgggct	acqtcttqct	10140
	ggcgttcgcg	n acgcgaggct	ggatggcctt	ccccattatg	attcttctcq	cttccaacaa	10200
	catcgggatg	cccgcgttgc	: aggccatgct	gtccaggcag	gtagatgacg	accatcaggg	10260
	acagetteaa	ggatcgctcg	r cggctcttac	cagcctaact	tcgatcactg	gaccgctgat	10320
	cgtcacggcg	atttatgccg	cctcggcgag	cacatggaac	gggttggcat	ggattgtagg	10380
	cgccgcccta	taccttgtct	gcctccccgc	gttgcgtcgc	ggtgcatqqa	qccqqqccac	10440
	ctcgacctga	atggaagccg	gcggcacctc	gctaacggat	tcaccactcc	aagaattgga	10500
	gccaatcaat	tcttgcggag	aactgtgaat	gcgcaaacca	acccttggca	gaacatatcc	10560
	accgcgcccg	ccatctccag	cagccgcacg	cggcgcatct	cgggccgcqt	tactaacatt	10620
	tttccatagg	ctccgccccc	ctgacgagca	tcacaaaaat	cgacgctcaa	gtcagaggtg	10680
	gcgaaacccg	acaggactat	aaagatacca	ggcgtttccc	cctggaagct	ccctcqtqcq	10740
	ctctcctgtt	ccgaccctgc	cgcttaccgg	atacctgtcc	gcctttctcc	cttcqqqaaq	10800
	cgtggcgctt	tctcaatgct	cacgctgtac	ctatctcagt	tcggtgtacc	tcqttcqctc	10860
	caagctgggc	tgtgtgcacg	aaccccccgt	tcagcccgac	cgctgcgcct	tatccqqtaa	10920
	ctatcgtctt	gagtccaacc	cggtaagaca	cgacttatcg	ccactggcag	caqccactqq	10980
	taacaggatt	agcagagcga	ggtatgtagg	cggtgctaca	gagttcttga	agtggtggcc	11040
	taactacggc	tacactagaa	ggacagtatt	tggtatctgc	gctctgctga	agccagttac	11100
	cttcggaaaa	agagttggta	gctcttgatc	cggcaaacaa	accaccgctg	gtagcggtgg	11160
	tttttttgtt	tgcaagcagc	agattacgcg	cagaaaaaaa	ggatctcaag	aagatccttt	11220
	gatetttet	acggggtctg	acgctcagtg	gaacgaaaac	tcacqttaaq	ggattttggt	11280
	catgagatta	tcaaaaagga	tcttcaccta	gatcctttta	aattaaaaat	gaagttttaa	11340
	atcaatctaa	agtatatatg	agtaaacttg	gtctgacagt	taccaatqct	taatcagtga	11400
	ggcacctatc	tcagcgatct	gtctatttcg	ttcatccata	gttgcctgac	tccccatcat	11460
	gtagataact	acgatacggg	agggcttacc	atctggcccc	agtgctgcaa	tgataccgcg	11520
	agacccacgc	tcaccggctc	cagatttatc	agcaataaac	caqccaqcca	gaagggccga	11580
	gcgcagaagt	ggtcctgcaa	ctttatccgc	ctccatccag	tctattaatt	gttgccggga	11640
	agctagagta	agtagttcgc	cagttaatag	tttgcgcaac	gttgttgcca	ttqctqcaqq	11700
	categtggtg	tcacgctcgt	cgtttggtat	ggcttcattc	agctccggtt	cccaacqatc	11760
	aaggcgagtt	acatgatccc	ccatgttgtg	caaaaaagcg	gttagctcct	tcaatcctcc	11820
	gategttgte	agaagtaagt	tggccgcagt	gttatcactc	atggttatgg	cagcactgca	11880
	taattctctt	actgtcatgc	catccgtaag	atgcttttct	gtgactggtg	agtactcaac	11940
	caagtcattc	tgagaatagt	gtatgcggcg	accgagttgc	tcttgcccqq	cqtcaacacq	12000
	ggataatacc	gcgccacata	gcagaacttt	aaaagtgctc	atcattggaa	aacqttcttc	12060
	ggggcgaaaa	ctctcaagga	tcttaccgct	gttgagatcc	agttcgatgt	aacccactcq	12120
	tgcacccaac	tgatcttcag	catcttttac	tttcaccagc	gtttctgggt	gagcaaaaac	12180
	aggaaggcaa	aatgccgcaa	aaaagggaat	aagggcgaca	cggaaatgtt	gaatactcat	12240
	actcttcctt	tttcaatatt	attgaagcat	ttatcagggt	tattqtctca	tgagcggata	12300
- (catatttgaa	tgtatttaga	aaaataaaca	aataqqqqtt	ccqcqcacat	ttccccgaaa	12360
•	agtgccacct	gacgtctaag	aaaccattat	tatcatgaca	ttaacctata	aaaataggcg	12420
İ	tatcacgagg	ccctttcgtc	ttcaa	_			12445

```
<210> 3
<211> 23
<212> DNA
<213> Homo sapiens
<400> 3
```

gcccttttct tggatcaagg tgg

<210> 4 <211> 23 23

<212> DNA <213> Homo sapiens

<400> 4 ctccctgagt agttactcct gtg

23